Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-0838-16-F(R2) Plant ID: 0838

Effective Date: 5/18/2016 Expiration Date: 5/31/2021

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Owner/Source: International Paper Company
4400 Progress Blvd.
Louisville, Kentucky 40218

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve (12) months and no later than ninety (90) days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant: VOC
Tons/year: <25

Application No.: See **Application and Related Documents** table.
Date of Public Notice: 16 APR 2016; 18 JUL 2017

Permit writer: Lana Stilger

Air Pollution Control Officer
August 18, 2017

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FEDOOP Permit Revisions/Changes

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	172-04-F	3/31/2006	12/4/2005	Initial	Entire Permit	Initial Permit Issuance
NA	O-0838-16-F	5/18/2016	4/16/2016	Renewal	Entire Permit	Name change and permit renewal to include construction permits, STAR exempt status , and removal of: • Cyclone Separator (Permit 172-04-F, attachment 144-87) • American scrap baler (Permit 172-04-F, attachment 145-87) • Ward 2-color printer/die cutter (Permit 172-04-F, attachment 145-87) • Langston flexographic folder/gluer (Permit 172-04-F, attachment 527-91)
R1	O-0838-16-F(R1)	10/13/2016	N/A	Administrative Revision	Insignificant Activities	Incorporation of New 7.876 MMBtu/hr Boiler to replace decommissioned existing Boiler in IA List and Emission Unit
R2	O-0838-16-F(R2)	08/18/2017	07/18/2017	Significant Revision	General Conditions	Removed GHG emission limits from General Condition 10, as it no longer applies
				Administrative Revision	Emission Unit U1	Incorporation of Construction Permit C-0838-1006-17-F

Construction Permit Incorporated in Renewal:

Permit No.	Effective Date	Description
4-09-C	1/8/2009	Installation of corrugating machine
26-10-C	2/24/2010	Installation of Ward 3-color press
35314-12-C(R1)	6/13/2012	Installation of S&S flexographic press
F-13-1005-C	10/17/2013	Installation of Martin mini press

Permit No.	Effective Date	Description
F-13-1007-C	12/11/2013	Installation of Aircon cyclone
C-0838-1006-17-F	06/16/2017	Installation of One (1) Ward (2475), 66" x 125", 3-color flexographic printer/rotary die cutter; capacity: 10,000 sheets/hr and removal of Printer 5 (Ward flexographic printer/folder/die cutter) and Printer 6 (Martin DR 01628 flexographic printer/rotary die cutter)

Applications and Related Documents

Document Number	Date Received	Description
14678	12/10/2010	FEDOOP Renewal Application
65846	07/03/2014	Application AP-100A and AP-100P
71871	06/01/2015	Application AP-100A STAR Exempt
78858	08/10/2016	Revised Application AP-100A and AP-200E
83534	4/13/2017	Application AP-100A and AP-100B
83816	4/21/2017	Modified Application Form AP-100A
84030	5/8/2017	Approved Construction Potential to Emit Calculations
84816	6/16/2017	Construction Permit C-0838-1006-17-F
84817	6/16/2017	Construction Permit C-0838-1006-17-F Statement of Basis

Abbreviations and Acronyms

AP-42 - AP-42, *Compilation of Air Pollutant Emission Factors, published by U.S.EPA*
APCD - Louisville Metro Air Pollution Control District
BAC - Benchmark Ambient Concentration
BACT - Best Available Control Technology
Btu - British thermal unit
CEMS - Continuous Emission Monitoring System
CFR - Code of Federal Regulations
CO - Carbon monoxide
District - Louisville Metro Air Pollution Control District
EA - Environmental Acceptability
gal - U.S. fluid gallons
GHG - Greenhouse Gas
HAP - Hazardous Air Pollutant
HCl - Hydrogen chloride
Hg - Mercury
hr - Hour
in. - Inches
lbs - Pounds
l - Liter
LMAPCD - Louisville Metro Air Pollution Control District
mmHg - Millimeters of mercury column height
MM - Million
NAICS - North American Industry Classification System
NO_x - Nitrogen oxides
PM - Particulate Matter
PM_{10} - Particulate Matter less than 10 microns
$PM_{2.5}$ - Particulate Matter less than 2.5 microns
ppm - parts per million
PSD - Prevention of Significant Deterioration
psia - Pounds per square inch absolute
QA - Quality Assurance
RACT - Reasonably Available Control Technology
SIC - Standard Industrial Classification
SIP - State Implementation Plan
SO_2 - Sulfur dioxide
STAR - Strategic Toxic Air Reduction
TAC - Toxic Air Contaminant
UTM - Universal Transverse Mercator
VOC - Volatile Organic Compound
w.c. - Water column
year - Any period of twelve consecutive months, unless "calendar year" is specified
yr - Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.

2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.

3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.

4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-O.

5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.

6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.

7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.

8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.

9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as

the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in Section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.

10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM_{10}, $PM_{2.5}$, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; or any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA. Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.

11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.

12. Unless specified elsewhere in this permit, the owner or operator shall submit annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All annual compliance reports shall include the following per Regulation 2.17, section 3.5.

    - A certification statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete", and
    - The signature and title of a responsible official of the company.

    The report must be postmarked no later than March 1 of the year following the calendar year covered in the annual report.

13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emissions Standards and Maintenance Requirements
1.06	Source Self-Monitoring, Emissions Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution

Regulation	Title
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.17	Federally Enforceable District Origin Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions

14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Fees
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption of Federal New Source Performance Standards

15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.

16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.

17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, KY 40203-3137

Plantwide Specific Conditions

Plantwide Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emissions	2.4
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2
5.00	Definitions	All

Plantwide Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **PM_{10}**

i. The owner or operator shall not allow the plantwide PM_{10} emissions to equal or exceed twenty five (25) tons during any consecutive twelve (12) month period. [1] (Regulation 5.00, section 1.13.5.1)

ii. No owner or operator shall cause or permit the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. (Regulation 1.14, section 2.4)

b. **VOC**

i. The owner or operator shall not allow or cause the plantwide VOC emissions to exceed 25 tons during any consecutive 12-month period. [2] (Regulation 2.17, section 5.1)

ii. The owner or operator shall store all VOC containing materials in closed containers when not in use. This includes materials such as inks, solvents, glues, adhesives, and any other VOC-containing materials. (Regulation 2.17, section 5.2)

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

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[1] This facility has a calculated uncontrolled PTE for PM_{10} of 63.31 tons per year from the emission units. Opting to limit PM_{10} emissions to less than 25 ton/year allows this facility to avoid STAR requirements.

[2] This facility has a calculated uncontrolled PTE for VOC of 392.68 tons per year from the emission units. Opting to become a synthetic minor source and limiting VOC emissions to less than 25 ton/year allows this facility to avoid STAR requirements. The source has a limit of <25 tpy VOC to avoid daily record keeping as listed in the CTG for printing.

a. **PM_{10}**

i. The owner or operator shall calculate PM_{10} emissions from Printer 4 and Printer 5a, Corrugator, Cyclone, and Starch silo utilizing the formula shown below, unless another method is approved in writing by the District[3]:

Plant wide $_{PM10}$ = Cyclone $_{PM\text{-}10}$+Starch silo $_{PM\text{-}10}$

$$\text{Cyclone}_{PM-10} = (A)(B)\left(\frac{1\text{ ton}}{2000\text{ lb}}\right)\left(\frac{\text{number of operating hours}}{1\text{ month}}\right)$$

A = cyclone throughput $\left(\frac{\text{lb trim}}{\text{hr}}\right)$

B = emission factor $\left(0.001\ \frac{\text{lb}}{\text{lb trim}}\right)^{*}$

*District standard

$$\text{Starch silo}_{PM-10} = (A)(B)\left(\frac{1\text{ ton}}{2000\text{ lb}}\right)\left(\frac{\text{number of operating hours}}{1\text{ month}}\right)$$

A = silo throughput $\left(\frac{\text{ton}}{\text{hr}}\right)$

B = emission factor $\left(0.27\ \frac{\text{lb}}{\text{ton}}\right)^{*}$

*District standard

ii. The owner or operator shall account for the minor PM_{10} emissions from Insignificant Activities when totaling the monthly plantwide emissions. Since the emissions are minor the owner or operator may use the potential PM_{10} emissions as the monthly emissions.

1) District calculated PM_{10} PTE for the Baler is 620.0 pound/month each.

2) District calculated PM_{10} PTE for Boilers 1 and 2 is 96.67 pound/month combined.

iii. The owner or operator shall maintain monthly records, including calculations that show the plantwide monthly PM_{10} emissions during each calendar month and consecutive 12-month period.

b. **VOC**

i. The owner or operator shall, on a monthly basis, monitor and record the quantity of all VOC-containing materials purchased or used at this plant during each calendar and consecutive 12-month period to assure ongoing compliance with the plantwide VOC emission limit.

[3] The PM_{10} emissions from the printers and corrugator are accounted for through the trim that the cyclone processes.

ii. The owner or operator shall maintain a copy of the material safety data sheet (MSDS/SDS) for each VOC-containing material used at this plant.

iii. The owner or operator shall calculate VOC emissions from the flexographic printing by using the formulas shown below, unless another method is approved in writing by the District:

Plant wide $_{VOC}$ = (Ink $_{VOC}$) + (Cleaner $_{VOC}$) + (Antifoam $_{VOC}$) + (Glue $_{VOC}$)

$Ink_{VOC(ton)}$ = [(Ink purchased or used (gal/month)(Density (lb/gal))(VOC content (%))$\left(\frac{1\ ton}{2000\ lb}\right)$] or

$Ink_{VOC(ton)}$ = [(Ink purchased or used (gal/month))(VOC content (lb/gal)) $\left(\frac{1\ ton}{2000\ lb}\right)$]

$Cleaner_{VOC}$ = [(Cleaner purchased or used (gal/month))(Density (lb/gal))(VOC content (%)) (1 ton/2000 lb]

$Antifoam_{VOC}$ = [(Antifoam purchased or used (gal/month))(Density(lb/gal)(VOC Content (%))(1 ton/2000lb)]

$Adhesive_{VOC}$ = (Material purchased or usage amount)(Wt% VOC)(1 – control efficiency)

iv. The owner or operator shall account for the minor VOC emissions from Insignificant Activities when totaling the monthly plantwide emissions. Since the emissions are minor the owner or operator may use the potential VOC emissions as the monthly emissions.

1) District calculated VOC PTE for the Storage tank is 606.67 pound/month.

2) District calculated VOC PTE for the Parts washer is 68.33 pound/month.

v. The owner or operator shall monthly maintain records, including calculations, which show the plantwide VOC emissions during each calendar month and consecutive 12-month period.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall report the following information, as required by General Condition 12:

a. **PM_{10}**

i. All annual compliance reports shall include the total plantwide calendar month PM_{10} emissions and the total plantwide consecutive 12-month PM_{10} emissions for each month in the reporting period.

b. **VOC**

i. All annual compliance reports shall include the total plantwide calendar month VOC emissions and the total plantwide consecutive 12-month VOC emissions for each month in the reporting period.

Emission Unit U1: Printing Presses

U1 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2
6.29	Standard of Performance for Graphic Arts Facilities Using Rotogravure or Flexographic Printing	3.1, 3.2, 3.3, 6.0
7.08	Standards of Performance for New Process Operations	3.1.1, 3.1.2

U1 Equipment:

Emission Point	Description	Applicable Regulation	Control ID	Stack ID	Installation Date
Printer 1	Ward (5376), 66"x113", 3-color flexographic printer/folder/gluer, Capacity: 10000 sheet/hour	2.17 & 6.29	NA	NA	2010
Printer 2	S&S (5146), 38"x94", 2-color, flexographic printer/folder/gluer, Capacity:15000 sheet/hour	2.17 & 6.29	NA	NA	2013
Printer 3	Martin mini (5074), 24"x66", 2-color, flexographic printer/folder/gluer, Capacity: 24000 sheet/hour	2.17 & 6.29	NA	NA	2013
Printer 4	Ward (5116), 37"x 96", 3-color flexographic printer/folder/gluer (vented to Cyclone), Capacity: 18000 sheet/hour	2.17, 6.29, & 7.08	NA	NA	2005
Printer 5a	Ward (2475), 66"x125", 3-color flexographic printer/rotary die cutter (vented to Cyclone), Capacity: 10000 sheet/hr	2.17, 6.29, & 7.08	NA	NA	2017

U1 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **Opacity**

i. For each PM emission point in this emission unit (Printer 4, Printer 5, and Printer 6), the owner or operator shall not allow or cause the visible emissions to equal or exceed 20% opacity. (Regulation 7.08, section 3.1.1)

b. **PM/PM_{10}**

i. For the Ward flexographic printer/folder/gluer (Printer 4), the owner or operator shall not allow or cause the PM emissions to exceed 3.85 pound/hour.[4] (Regulation 7.08, section 3.1.2)

ii. For the Ward flexographic printer/die cutter (Printer 5a), the owner or operator shall now allow or cause the PM emissions to exceed 2.34 pound/hour.[5] (Regulation 7.08, section 3.1.2)

iii. See Plantwide Emission Unit.

c. **VOC**

i. A person shall not cause or allow the emission of VOC from any affected facility unless at least one of the following requirements is met: (Regulation 6.29, section 3.1)(Permit 26-10-C)

1) The volatile fraction of all inks and coatings, as applied to the substrate, used on the affected facility shall contain no more than 25% VOC by volume, [6] (Regulation 6.29, section 3.1.1)

2) The non-volatile fraction, minus water and exempt solvents, of all inks and coatings, as applied to the substrate, used on the affected facility shall be at least 60% by volume, (Regulation 6.29, section 3.1.2)

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[4] For the Ward printer (Printer 4), PM emissions are assumed to be in compliance with the emission standard based on a maximum throughput (amount removed for the presses), the assumption that 0.1% of the material is PM, and the Cyclone collection efficiency is 80%. The maximum PM emissions are 0.45 pound/hour.

[5] For the Ward printer (Printer 5a), a one-time PM compliance demonstration was performed and the emission limit cannot be exceeded uncontrolled. Therefore, there are no monitoring and record keeping or reports requirements.

[6] The flexographic inks currently used comply with Regulation 6.29, section 3.1.1 (less than 25% VOC by volume). (Permit 26-10-C)(Permit 172-04-F)

3) All inks and coatings, as applied to the substrate, used on the affected facility shall contain no more than 0.5 pound of VOC per pound of solids, or (Regulation 6.29, section 3.1.3)

4) The VOC emissions shall not exceed the following limit as applicable: [7]

(a) For flexographic printing, 40% by weight of the VOC net input into the affected facility. (Regulation 6.29, section 3.1.4.3)

(b) Compliance with the requirements shall be based upon the inks and coatings, as applied, used by the affected facility during a calendar-day averaging period. The District may specifically authorize compliance to be based upon a longer averaging period that shall not exceed one calendar month. If more than one requirement would be applicable for a specific affected facility, then he least stringent requirement shall apply. (Regulation 6.29, section 3.2 and 3.3)

ii. See Plantwide Emission Unit.

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. The owner or operator shall conduct a monthly one-minute visible emissions survey, during normal operation, of emission point (cyclone which Printer 4 and Printer 5a vent the PM emissions through). The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

[7] The uncontrolled potential VOC emissions from the Ward 3-color flexographic printer (Printer 1) are 8.70 ton/year. The source has an annual plantwide VOC emission limit of 25 ton/year in their FEDOOP permit. (Permit 26-10-C)

iii. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. **PM/PM_{10}**

i. This emission unit has no routine compliance monitoring or record keeping requirements for Regulation 7.08.

ii. See Plant wide Emission Unit.

c. **VOC** (Regulation 6.29, section 6)

i. An owner or operator of an affected facility subject to Regulation 6.29 shall maintain monthly records of operations for the most recent five-year period. The records shall be made available to the District, the Cabinet, and the EPA upon request. The records shall include, but not be limited to, the following:

1) The regulation and section number applicable to the affected facility for which the records are being maintained,

2) The application method and substrate type (metal, plastic, etc.),

3) The amount and type of each ink, coating, and solvent used at each point of application, including exempt compounds, during the averaging period. The District shall approve a written request for the usage record to reflect a period longer than the compliance averaging period if the material usage is prorated for each compliance averaging period by using a measurable indicator that is determined by the District to be directly and proportionally related to material usage, such as linear feet or area of substrate printed. In this case, the usage period shall not exceed 1 calendar month,

4) The VOC content as applied in each ink, coating and solvent,

5) The date for each application of each ink, coating, and solvent[8].

[8] The date of application can be a daily record of which presses were operated and the number of jobs each presses processed that day.

ii. See Plantwide Emission Unit.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall report the following information, as required by General Condition 12:

a. **Opacity**

i. See emission unit U3 for opacity reporting requirements for the cyclone.

b. **PM/PM_{10}**

i. This emission unit has no routine compliance reporting requirements for Regulation 7.08.

ii. See Plantwide Emission Unit.

c. **VOC**

i. This emission unit has no routine compliance reporting requirements for Regulation 6.29.

ii. See Plantwide Emission Unit.

Emission Unit U2: Corrugator

U2 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2
7.08	Standards of Performance for New Process Operations	3.1.1, 3.1.2
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	3

U2 Equipment:

Emission Point	Description	Applicable Regulation	Control ID	Stack ID	Installation Date
Corrugator	Corrugator/gluer (vented to cyclone), 435000 ft^2/hour or 53070 pound/hour	2.17 7.08 7.25	NA	NA	2009

U2 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **Opacity**

The owner or operator shall not allow visible emissions to equal or exceed 20% opacity. (Regulation 7.08, section 3.1.1)

b. **PM/PM_{10}**

i. The owner or operator shall not allow or cause PM emissions from this equipment (Corrugator) to exceed 27.41 pound/hour. [9] (Regulation 7.08, section 3.1.2)(Permit 4-09-C)

ii. See Plantwide Emission Unit.

c. **VOC**

i. For the Corrugator and any new equipment installed subject to District Regulation 7.25, the owner or operator shall limit the VOC emissions to less than or equal to 5.0 tons per 12 consecutive month period total unless a BACT is approved. (Regulation 7.25, section 3) (Permit 4-09-C)

ii. See Plantwide Emission Unit.

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. The owner or operator shall conduct a monthly one-minute visible emissions survey, during normal operation, of the cyclone (the Corrugator PM emissions vent through the cyclone). The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall

[9] The District performed a one-time compliance demonstration for PM on 12/19/2008, and the equipment could not exceed the standard uncontrolled. (Permit 4-09-C). The corrugator has a PM potential to emit of 11.62 ton/year and cannot exceed the pound/hour standard uncontrolled.

perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. **PM/PM_{10}**

i. This emission unit has no routine compliance monitoring or record keeping requirements for Regulation 7.08.

ii. See Plantwide Emission Unit.

c. **VOC**

i. The owner or operator shall maintain monthly records that show the VOC emissions during each calendar month and consecutive 12-month period for equipment subject to District Regulation 7.25.

ii. See Plantwide Emission Unit.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall report the following information, as required by General Condition 12:

a. **Opacity**

i. See emission unit U3 for opacity reporting requirements for the cyclone.

b. **PM/PM_{10}**

i. This emission unit has no routine compliance reporting requirements for Regulation 7.08.

ii. See Plantwide Emission Unit.

c. **VOC**

i. The owner or operator shall report the VOC emissions during each calendar month for each month in the reporting period for this equipment and;

ii. The consecutive 12-month VOC emissions for each month in the reporting period for this equipment.

iii. See Plantwide Emission Unit.

Emission Unit U3: Cyclone and Silo

U3 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2
7.08	Standards of Performance for New Process Operations	3.1.1, 3.1.2

U3 Equipment:

Emission Point	Description	Applicable Regulation	Control ID	Stack ID	Installation Date
Cyclone	Aircon cyclone separator, model 18/10, recycling operation, 10,717 pound/hour	2.17, 7.08	NA	NA	2013
Starch silo	Starch silo, 27 ton/hour		Collector 1	S-1	2000

U3 Control Devices:

Control ID	Description	Control Efficiency	Performance Indicator	Stack ID
Collector 1	Baghouse dust collector	95%	Equipment Inspections	S-1

U3 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **Opacity**

i. The owner or operator shall not allow visible emissions to equal or exceed 20% opacity. (Regulation 7.08, section 3.1.1)

b. **PM/PM_{10}**

i. For the Starch silo, the owner or operator shall not allow or cause the PM emissions to exceed 27.7 pound/hour. [10] (Regulation 7.08, section 3.1.2)

ii. For the Cyclone, the owner or operator shall not allow or cause the PM emissions to exceed 10.16 pound/hour. [11] (Regulation 7.08, section 3.1.2)(Permit F-13-1007-C)

iii. The owner or operator shall operate and maintain the control device at all times an associated emission point is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 7.08, section 3.1.2)

iv. See Plantwide Emission Unit.

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. The owner or operator shall conduct a monthly one-minute visible emissions survey, during normal operation, of the Cyclone and Collector 1. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

[10] For the starch silo, based on a maximum throughput of 27 tph, an emission factor of 0.18 pound PM per ton of material processed, and a control efficiency of 95%, the PM emissions are below the applicable emission standard. (Permit 172-04-F)

[11] For the cyclone, based on a maximum throughput of scrap paper of 10,717 pound/hour and the constant recycle of 12,000 pound/hour, the assumption that 0.1% of that material can be considered particulate matter, and a collection efficiency of 80%, the PM emissions are 4.54 pound/hour. (Permit 172-04-F). A one-time PM compliance demonstration for this equipment has shown the pound/hour standard cannot be exceeded uncontrolled. (Permit F-13-1007-C)

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record

b. **PM/PM_{10}**

i. For the control device (Collector 1) and the Cyclone, the owner or operator shall perform a monthly visual inspection of the structural and mechanical integrity for signs of damage, air leakage, corrosion, or any other equipment defect.

ii. The owner or operator shall maintain monthly records that show the results of the monthly visual inspections of the control device (Collector 1) and Cyclone. The records shall include the date of inspection, the name of the person that performed the inspection, identification of any defective components, identification of any components replaced or repaired and the date the component was repaired or replaced.

iii. The owner or operator shall maintain monthly records of the type and amount of products transferred. For the cyclone the throughput should be in lb/hour and for the silo the throughput should be in tons/hour.

iv. The owner or operator shall maintain daily records of the hours of operation.

v. The owner or operator shall maintain daily records of any periods of time where the process was operating and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating.

vi. If there is any time that the control device is bypassed or not in operation when the process is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) PM emissions during the bypass in lb/hr;

5) Summary of the cause or reason for each bypass event;

6) Corrective action taken to minimize the extent or duration of the bypass event; and

7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

8) The owner or operator shall calculate PM emissions from Cyclone and Starch silo utilizing the formula shown below, unless another method is approved in writing by the District:

$$\text{Cyclone}_{PM-10} = (A)(B)(1/\text{Hours of bypass event})$$

A = cyclone throughput (lbs of trim during bypass event)

$$B = \text{emission factor } \left(0.001 \frac{\text{lb}}{\text{lb trim}}\right)^{*}$$

*District standard

$$\text{Starch silo}_{PM-10} = (A)(B)\left(\frac{1}{\text{hours of bypass event}}\right)$$

A = silo throughput (tons of starch during bypass event)

$$B = \text{emission factor } \left(0.27 \frac{\text{lb}}{\text{ton}}\right)^{*}$$

*District standard

vii. See Plantwide Emission Unit.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall report the following information, as required by General Condition 12:

a. **Opacity**

i. Emission Unit number and Emission Point number for each exceedance

ii. The beginning and ending date of the reporting period

iii. The number of surveys where visible emissions were observed

iv. The date, time, and results of each Method 9 that exceeded the opacity standard

v. Description of any corrective action taken for each exceedance.

b. **PM/PM_{10}**

i. The owner or operator shall report the following information regarding PM bypasses in the annual compliance reports.

1) Number of times the PM vent stream bypasses the control device and is vented to the atmosphere;

2) Duration of each bypass to the atmosphere;

3) Calculated pound per hour PM emissions for each bypass; or

4) A negative declaration if no bypasses occurred.

ii. See Plantwide Emission Unit.

Insignificant Activities

Equipment	Quantity	PTE (tpy)	Regulation Basis
Adhesive storage tank, 6000 gallon	1	VOC=3.640	Regulation 1.02
Safety-Kleen SK44 with secondary reservoir, 15 gallon	1	VOC=0.410	Regulation 1.02
American baler with process cyclone, 3400 pound/hour	1	PM_{10} =3.72	Regulation 1.02
Miura boiler, 9.0 MMBtu/hour	1	NOx=3.860 PM_{10} = 0.29	Regulation 1.02
Miura boiler, 7.876 MMBtu/hour	1	NOx = 3.38 PM_{10} = 0.26	Regulation 1.02

1) Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.

2) Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.

3) The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.

4) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5) The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.

6) The District has determined that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

Emission Unit I.A.-1: Minor Emission Points

I.A.-1 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	4.0, 4.1, 4.2, 4.3, 4.4
7.06	Standards of Performance for New Indirect Heat Exchangers	All
7.08	Standards of Performance for New Process Operations	3.1.1, 3.1.2
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	3.3

I.A.-1 Equipment:

Emission Point	Description	Applicable Regulation	Control ID	Stack ID	Installation Date
Storage tank	Adhesive storage tank, 6000-gallon	2.17, 7.12	NA	NA	2005
Parts washer	Safety-Kleen SK44 cold parts washer with secondary reservoir, 15-gallon	2.17, 6.18	NA	NA	1992
Baler 1	American baler with process cyclone, 3400 pound/hour	2.17, 7.08	NA	NA	2014
Boilers 1	Miura boiler, 9.0 MMBtu/hour	2.17, 7.06	NA	NA	2010
Boiler 2	Miura boiler, 7.876 MMBtu/hour	2.17, 7.06	NA	NA	2016

I.A.-1 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **Opacity**

i. The owner or operator shall not allow visible emissions to equal or exceed 20% opacity for Baler 1. (Regulation 7.08, section 3.1.1)

ii. The owner or operator shall not cause to be discharged into the atmosphere from any affected facility (Boilers 1 and 2) particulate matter emissions which exhibit greater than 20% opacity. (Regulation 7.06, section 4.2)

b. **PM/PM_{10}**

i. The owner or operator shall not allow or cause PM emissions from this equipment (Baler 1) to exceed 4.99 pound/hour. [12] (Regulation 7.08, section 3.1.2)

ii. The owner or operator shall not cause to be discharged into the atmosphere from that affected facility (Boiler 1) particulate matter in excess of 0.488 pounds per million BTU actual total heat input. (Regulation 7.06, section 4.1.4)[13]

iii. The owner or operator shall not cause to be discharged into the atmosphere from that affected facility (Boiler 2) particulate matter in excess of 0.423 pounds per million BTU actual total heat input. (Regulation 7.06, section 4.1.4)[13]

iv. See Plantwide Emission Unit.

c. **SO_2**

i. The owner or operator shall not cause to be discharged into the atmosphere from that affected facility (Boilers 1 and 2) any gases which contain sulfur dioxide in excess of 1.0 pounds per million BTU actual total

[12] A one-time compliance demonstration has been performed for PM on 7/10/2014, and the equipment could not exceed the standard uncontrolled. The baler has a PM potential to emit of 3.72 ton/year and cannot exceed the pound/hour standard uncontrolled.

[13] A one-time PM and SO_2 compliance demonstration has been permformed for the boilers, using AP-42 emission factors and combusting natural gas, and the pounds per million BTU emission standards cannot be exceeded. Therefore, there are no monitoring, record keeping, and reporting requirements for this boiler with respect to PM and SO_2 emission limits.

heat input for combustion of gaseous fuels. (Regulation 7.06, section 5.1.1)[13]

d. **VOC**

i. For each parts washer, the owner or operator shall install, maintain, and operate the control equipment as follows: (Regulation 6.18, section 4)

1) The cold cleaner shall be equipped with a tightly fitting cover that is free of cracks, holes, or other defects. If the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with 1 hand. (Regulation 6.18, section 4.1.1)

2) The cold cleaner shall be equipped with a drainage facility that is designed so that the solvent that drains off parts removed from the cleaner will return to the cold cleaner. The drainage facility may be external if the District determines that an internal type cannot fit into the cleaning system. (Regulation 6.18, section 4.1.2)

3) A permanent, conspicuous label summarizing the operating requirements specified in section 4.2 shall be installed on or near the cold cleaner. (Regulation 6.18, section 4.1.3)

4) If used, the solvent spray shall be a fluid stream, not a fine, atomized, or shower type spray, at a pressure that does not cause excessive splashing. Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. Solvent flow shall be directed downward to avoid turbulence at the air-solvent interface and to prevent solvent from splashing outside of the cold cleaner. (Regulation 6.18, section 4.1.4)

5) Work area fans shall be located and positioned so that they do not blow across the opening of the cold cleaner. (Regulation 6.18, section 4.1.6)

6) The solvent-containing portion of the cold cleaner shall be free of all liquid leaks. Auxiliary cold cleaner equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible liquid leaks, visible tears, or cracks. (Regulation 6.18, section 4.1.8)

ii. The owner or operator shall observe at all times the following operating requirements: (Regulation 6.18, section 4.2)

1) Waste solvent shall neither be disposed of nor transferred to another party in a manner such that more than 20% by weight of the waste solvent can evaporate. Waste solvent shall be stored only in a covered container. A covered container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container. (Regulation 6.18, section 4.2.1)

2) The solvent level in the cold cleaner shall not exceed the fill line. (Regulation 6.18, section 4.2.2)

3) The cold cleaner cover shall be closed whenever a part is not being handled in the cold cleaner. (Regulation 6.18, section 4.2.3)

4) Parts to be cleaned shall be racked or placed into the cold cleaner in a manner that will minimize drag-out losses. (Regulation 6.18, section 4.2.4)

5) Cleaned parts shall be drained for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back to the cold cleaner. (Regulation 6.18, section 4.2.5)

6) A spill during solvent transfer shall be cleaned immediately, and the wipe rags or other sorbent material shall be immediately stored in a covered container for disposal or recycling, unless enclosed storage of these items is not allowed by fire protection authorities. (Regulation 6.18, section 4.2.6)

7) Sponges, fabric, wood, leather, paper products, and other absorbent material shall not be cleaned in a cold cleaner. (Regulation 6.18, section 4.2.7)

iii. The owner or operator shall not operate a cold cleaner using a solvent with a vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°C (68°F). [14] (Regulation 6.18, section 4.3.2)

iv. The owner or operator shall not store materials with an as stored vapor pressure of greater than or equal to 1.5 psia in the storage vessel(s), unless the storage tank is equipped with a permanent submerged fill pipe. (Regulation 7.12, section 3.3) [15]

[14] The solvent used in the parts washer is Safety-Kleen Solvent 105 with vapor pressure of 0.40 mm Hg at 20°C.

[15] The 6,000-gallon VOC tank is used to store the HB Fuller adhesive/glue. Regulation 7.12 applies due to the size of the tank. The vapor pressure as stored is less than 1.5 psia; therefore, no applicable standards apply to this tank. (Permit 172-04-F)

v. See Plantwide Emission Unit.

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. The owner or operator shall conduct a monthly one-minute visible emissions survey, during normal operation, of the baler. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

iv. There are no routine compliance monitoring or record keeping for boilers 1 and 2.[16]

b. **PM/PM_{10}**

i. The Baler has no routine compliance monitoring or record keeping requirements for Regulation 7.08.

ii. Boilers 1 and 2 have no routine compliance monitoring or record keeping requirements for Regulation 7.06.

[16] The District has determined that using a natural gas fired boiler will inherently meet the 20% opacity standard. Therefore, the company is not required to perform periodic monitoring to demonstrate compliance with the opacity standard.

iii. See Plantwide Emission Unit.

c. **SO_2**

i. Boilers 1 and 2 have no routine compliance monitoring or record keeping requirements for Regulation 7.06.

d. **VOC**

i. The owner or operator shall maintain records that include the following for each purchase: (Regulation 6.18, section 4.4.2)

1) The name and address of the solvent supplier,

2) The date of the purchase,

3) The type of the solvent, and

4) The vapor pressure of the solvent measured in mm Hg at 20°C (68°F).

ii. All records required in Specific Condition S2.d.i shall be retained for 5 years and made available to the District upon request. (Regulation 6.18, section 4.4.3)

iii. The owner or operator of the storage vessel(s) shall maintain records of the material stored and the vapor pressure in each storage vessel and if the contents of the storage vessel(s) are changed a record shall be made of the new contents, the date of the change, and the new vapor pressure in order to demonstrate compliance.

iv. See Plantwide Emission Unit.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall report the following information, as required by General Condition 12:

a. **Opacity**

i. For the baler:

1) Emission Unit number and Emission Point number for each exceedance

2) The beginning and ending date of the reporting period

3) The number of surveys where visible emissions were observed

4) The date, time, and results of each Method 9 that exceeded the opacity standard

5) Description of any corrective action taken for each exceedance.

ii. Boilers 1 and 2 have no routine compliance reporting requirements for Regulation 7.06.

b. **PM/PM_{10}**

i. Baler 1 has no routine compliance reporting requirements for Regulation 7.08.

ii. Boilers 1 and 2 have no routine compliance reporting requirements for Regulation 7.06.

iii. See Plantwide Emission Unit.

c. **SO_2**

i. Boilers 1 and 2 have no routine compliance reporting requirements for Regulation 7.06.

a. **VOC**

i. The parts washer has no routine compliance reporting requirements for Regulation 6.18.

ii. The storage tank has no routine compliance reporting requirements for Regulation 7.12.

iii. See Plantwide Emission Unit.

Fee Comment

The administrative fee for revision 2 of this FEDOOP permit to incorporate construction permit C-0838-1006-17-F is of $523.02 in accordance with the Schedule of Fees table, Regulation 2.08, section 12.9.6. This fee shall be paid to the District prior to the issuance of the permit.

Attachment A - Protocol Checklist for a Performance Test

A completed protocol should include the following information:

- ☐ 1. Facility name, location, and ID #;
- ☐ 2. Responsible Official and environmental contact names;
- ☐ 3. Permit numbers that are requiring the test to be conducted;
- ☐ 4. Test methods to be used (i.e. EPA Method 1, 2, 3, 4, and 5);
- ☐ 5. Alternative test methods or description of modifications to the test methods to be used;
- ☐ 6. Purpose of the test including equipment and pollutant to be tested; the purpose may be described in the permit that requires the test to be conducted or may be to show compliance with a federal regulation or emission standard;
- ☐ 7. Tentative test dates (These may change but the District will need final notice at least 10 days in advance of the actual test dates in order to arrange for observation.);
- ☐ 8. Maximum rated production capacity of the system;
- ☐ 9. Production-rate goal planned during the performance test for demonstration of compliance (if appropriate, based on limits);
- ☐ 10.Method to be used for determining rate of production during the performance test;
- ☐ 11. Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance;
- ☐ 12. Description of normal operation cycles;
- ☐ 13. Discussion of operating conditions that tend to cause worse case emissions; it is especially important to clarify this if worst case emissions do not come from the maximum production rate;
- ☐ 14. Process flow diagram;
- ☐ 15. The type and manufacturer of the control equipment, if any;
- ☐ 16. The control equipment (baghouse, scrubber, condenser, etc.) parameter to be monitored and recorded during the performance test. Note that this data will be used to ensure representative operation during subsequent operations. These parameters can include pressure drops, flow rates, pH, and temperature. The values achieved during the test may be required during subsequent operations to describe what pressure drops, etcetera, are indicative of good operating performance; and
- ☐ 17. How quality assurance and accuracy of the data will be maintained, including;
  - o Sample identification and chain-of-custody procedures
  - o If audit samples are required for this test method, audit sample provider and number of audit samples to be used
- ☐ 18. Pipe, duct, stack, or flue diameter to be tested;
- ☐ 19. Distances from the testing sample ports to the nearest upstream and downstream flow disturbances such as bends, valves, constrictions, expansions, and exit points for outlet and additionally for inlet;
- ☐ 20. Determine number of traverse points to be tested for outlet and additionally for inlet if required using Appendix A-1 to 40 CFR Part 60;
  - o Method 1 if stack diameter is >12"
  - o Method 1a if stack diameter is greater than or equal to 4" and less than 12"
  - o Alternate method of determination for <4"
  - o If a sample location at least two stack or duct diameters downstream and half a diameter upstream from any flow disturbance is not available then an alternative procedure is available for determining the acceptability of a measurement location. This procedure described in Method 1, Section 11.5 allows for the determination of gas flow angles at the sampling points and comparison of the measured results with acceptability criteria.
- ☐ 21. The Stack Test Review fee shall be submitted with each stack test protocol.